

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-7 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,157,177 to Chan. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan in view of U.S. Patent No. 7,226,675 to Ovshinsky et al. (hereinafter “Ovshinsky”). Claim 9 stands rejected as being unpatentable over Chan. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan in view of U.S. Patent No. 7,255,954 to Hampden-Smith et al. (hereinafter “Hampden-Smith”).

By this amendment, the specification has been amended to correct minor errors. In particular, the specification has been amended to change the term “pores” to “through holes” throughout, to be consistent with the terms used in the claims. Claim 1 has been amended to further define the subject matter Applicants regard as the invention as discussed in greater detail below. Claims 2-9 and 11 remain unchanged in the application.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After amending the claims as set forth above, claims 1-9 and 11 remain pending in this application for consideration.

Applicants respectfully submit that each of the pending claims is patentably distinguishable over the cited references as required by §102 or §103. Applicants further submit that none of the cited references, whether considered alone or in combination, discloses, teaches or suggests Applicants’ claimed gas permeable substrate including *particles filled in an area defined by the through holes and the upper and lower layers, the particles forming particle layers such that the particle layers of the through holes are formed integrally with the particle layers of the upper and lower layers* as now required by sole independent claim 1. By contrast, the cited references fail to disclose, teach or suggest this claimed feature and arrangement. Accordingly, independent claim 1 and claims dependent

therefrom are patentably distinguishable over the cited references. This distinction will be further described below.

### **THE CLAIMS DISTINGUISH OVER THE CITED REFERENCES**

Claims 1-7 stand rejected as being anticipated by Chan and claims 8, 9 and 11 stand rejected as being unpatentable over various combinations of Chan, Ovshinsky and/or Hampden-Smith. In response, Applicants traverse the rejections and respectfully submit that sole independent claim 1 and claims dependent therefrom are allowable at least for the reasons that follow.

Applicants rely on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (e),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Section 103 amplifies the meaning of this anticipation standard by pointing out that anticipation requires that the claimed subject matter must be “*identically* disclosed or described” by the prior art reference. (Emphasis added.) It is respectfully submitted that Chan fails to describe each and every element of any of the claims.

Embodiments of the present invention are directed to a gas permeable substrate. The gas permeable substrate according to amended independent claim 1 includes a porous metallic plate, a plurality of through holes, at least an upper layer or a lower layer and particles. The porous metallic plate has a top surface and a bottom surface and the plurality of through holes extend through the porous metallic plate from the top and bottom surfaces. The upper layer is provided on the top surface of the porous metallic plate or the lower layer is provided on the porous metallic plate.

According to one embodiment of the present invention as now recited in amended independent claim 1, *particles are filled in an area defined by the through holes and the upper and lower layers, the particles forming particle layers such that the particle layers of the through holes are formed integrally with the particle layers of the upper and lower layers*. One exemplary embodiment of the present invention is illustrated in FIGS. 1 and 2 which shows the particle layers of the through holes 5 being forming integrally with the

particle layers of the upper or lower layers 7. Applicants respectfully submit that the cited references fail to disclose this claimed feature and arrangement.

Chan is directed to a porous fuel cell electrode structure having one or more conformal metallic layers deposited on one or more pore surfaces (Chan, abstract, lines 1-3). As illustrated in FIGS. 2A-2C of Chan, the electrode structure 200 includes a substrate 210 having one or more discrete porous bulk matrix regions 220 disposed across a top surface 230 of the substrate 210 with the discrete porous bulk matrix regions 220 being defined by a plurality of acicular or columnar pores 240 extending through the substrate 210 (column 5, lines 42-51). The plurality of columnar pores 240 define inner pore surfaces 250 and it is the inner pore surfaces 250 that have the conformal electrically conductive layer (column 5, lines 51-54). The conformal electrically conductive layer may have deposited thereon a plurality of catalyst particles (column 8, lines 45-50). As clearly illustrated in FIGS. 6 and 7 of Chan, the catalyst particles are formed on the inner pore surfaces 250 of the columnar pores 240.

Although Chan's substrate includes the top and bottom surface of the metallic plate, Chan's substrate, however, does not include the upper and lower layers provided on the porous metallic plate. Also, Chan's particles are only provided on the inner pore surfaces 250 of the columnar pores 240. Therefore, Chan's substrate cannot possibly include particles in the upper or lower layers. Moreover, Chan's substrate cannot possibly include either the particle filled upper layer or the particle filled lower layer being formed integrally with the particle filled through holes. Thus, Chan fails to disclose, teach or even remotely suggest *particles filled in an area defined by the through holes and the upper and lower layers, the particles forming particle layers such that the particle layers of the through holes are formed integrally with the particle layers of the upper and lower layer* as now required by independent claim 1. No such feature and arrangement is disclosed in Chan. For anticipation, however, "every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim." *Brown v. 3M*, 60 USPQ2d 1375 (Fed. Cir. 2001). Chan fails to disclose each of these features and arrangements of independent claim 1. Thus, Chan does not preclude the patentability of independent claim 1.

The Ovshinsky and Hampden-Smith references were relied upon to address various features recited in some of the dependent claims. Applicants respectfully submit that the Ovshinsky and Hampden-Smith references also fail to disclose, teach or suggest the above noted feature and arrangement and were not cited for that purpose.

In view of the fact that the Chan reference fails to disclose each of the claimed features and arrangements indicated above, this reference cannot be said to anticipate nor can it be said to render obvious the invention which is the subject matter of independent claim 1. Thus, independent claim 1 is allowable.

Since independent claim 1 is allowable, claims dependent therefrom, namely claims 2-9 and 11 are also allowable by virtue of their direct or indirect dependence from allowable independent claim 1 and for containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited reference are not necessary in view of their allowability. Applicants' silence as to the Office Action's comments is not indicative of being in acquiescence to the stated grounds of rejection.

### **CONCLUSION**

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith,

Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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